REMARKS

No claims have been amended. A listing of the claims is provided for the Examiner's convenience. Claims 1-11 and 15-20 remain pending in the application. Applicant respectfully requests reconsideration in light of the following remarks.

Claims 1-11 and 15-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pub. No. 2004/0004917 (Lee). The rejection is respectfully traversed.

The present application deals with a format process carried out before using an optical disk. This format process has two stages. The first stage is the "certify" process. This process writes data of a specific pattern to the optical disk. This stage determines whether data can be normally written to the optical disk. The next stage is the "verify" process. This process reads the data written during the "certify" process to determine whether data can be normally read from the optical disk. By applying error standards that are more stringent than those required during normal reading, the verify process helps eliminate portions of the disk that have borderline performance. Expressed differently, the format process errs on the side of excluding portions of the optical disk that may prove problematic during future reading and writing tasks.

During a format process, certain blocks of the Data Areas do not meet certain performance standards. Based on their poor performance, data that would have been written within those blocks must now be written on another portion of the optical disk. Generally, if an error occurs in a Data Area, the unwritten data is written into the Spare Area that immediately precedes the Data Area. This technique allows for the unwritten data to be written into a block of the Spare Area that has already undergone the format process, effectively guaranteeing that the unwritten data will be written onto an effective portion of the optical disk. If the unwritten data were written into a Spare Area that had not undergone the format process, the Spare Area could have its own performance problems, thereby hindering the progress of the format process.

Spare areas, however, are smaller than their corresponding Data Areas. Consequently, when large amounts of errors occur within a specific Data Area, that Data Area's corresponding Spare

Area may fill up, necessitating finding another location for the unwritten data. If format processes were always performed before writing actual user data to the optical disk, then a simple solution would be to just write the unwritten data to a previously formatted Spare Area. If format processes were always performed before writing any user data, any Spare Area prior to the Data Area that generated the error could be selected, because they would all be formatted.

The reality, however, is that user data is sometimes written to the optical disk prior to performing a format process on a later part of the optical disk. When this occurs, and the corresponding Spare Area of the Data Area is full, there exists the chance for the unwritten data from the later Data Area to be transferred to a Spare area where no format process has been conducted. Without a format process, no defect check of the Spare Area has been conducted, and there is an increased probability of an error occurring when the unwritten format data is written to the Spare Area. As such, the speed of the format process is reduced.

The present application deals generally with an apparatus capable of conducting a format process such that Spare Areas are screened to ensure that when unwritten data cannot go to a previously formatted Spare Area corresponding to the Data Area (because it is full), a Spare Area having already undergone formatting is located. If no already-formatted Spare Area is located, then the Spare Area selected may be formatted prior to writing the data intended for the Data Area.

In contrast to the present Application, Lee deals with the shortcomings of an optical disk's defect table. The defect table keeps the addresses of spare blocks located within Spare Areas, these spare blocks are used to store information that was intended for Data Areas determined to be defective. For example, if a disk drive reaches a defective area of a Data Area, it accesses the record in the defect table to determine what Spare Area it should access to find the missing information.

One shortfall of the defect table is that it categorizes every block within the Spare Areas by its status. A block is either used, free, or defective. This categorization is beneficial for certain situations, but it has shortfalls. One shortfall is that during data accessing, when a defective block

within a Spare Area is located, there is no fast method for determining if the defective block within the Spare Area has already been marked defective within the defect table. Instead of searching by the defective block's location and reading the defective block's status, the device must go to the defect table's list of defective blocks, and search through *every entry* until it determines whether the address of the recently-located defective block is present.

Instead of having the device search every "defective" entry until it determines the presence or non-presence of the recently-located defective block, Lee proposes a separate status table. Lee's separate status table is generated from the defect table, and stored on the memory of the disk drive. Unlike the defect table, however, Lee's status table would have a corresponding entry for every block of every Spare Area. Accordingly, when a defective block is encountered within a Spare Area, the device would merely reference the *single* corresponding entry in Lee's status table to determine whether the status table identifies the defective block as used, free, or defective.

In short, the present application teaches finding and using an already formatted Spare Area for use when a defective area of the optical disk is found, while Lee discusses a faster method of determining if a defective block within a Spare Area has already been labeled "defective."

Claim 1 recites an information recording/reproducing apparatus that comprises "means for performing a certify process and a verify process … and selecting an alterative destination for replacing a defective portion … such that the alternative destination is selected from another alternative area on which the certify process and the verify process have already been performed." Lee fails to teach at least these important limitations.

The Office Action relies on FIG. 5, element 38 and FIG. 6 as disclosing "means for performing a certify process and verify process." The terms "certify" and "verify" are defined in ¶ 0006 of the present Application, and are not met by Lee's control circuit 38 (FIG. 5). Lee's FIG. 6 diagrams the status table 50 locations as they correspond with the spare blocks on the optical disk track 24, and does not teach "means for performing a certify process and verify process" as recited by claim 1. Additionally, the Office Action's reliance on Lee FIGS. 7A-7B and

¶¶ 0051-0052 is misplaced. The paragraphs cited by the Office Action discuss how finding newly defective portions of the optical disk will result in portions of Lee's status table being changed from "free" to "used." This occurs when defective blocks are discovered, and the data intended for the defective block is moved to a block in a Spare Area. Accordingly, the status table – which tracks the status of the Spare Area blocks as either "free," "used," or "defective" – must change the status of a Spare Area block from "free" to "used." While an alternative area is selected, Lee does not teach an "alternative destination [that] is selected from another alternative area on which the certify process and the verify process have already been performed according to the predetermined sequence" as recited by claim 1.

Claim 2 depends from claim 1, and should be allowed along with claim 1, and on its own merits. Specifically, claim 2 recites "means for performing ... the certify process and the verify process on the alternative area having the alternative destination." As presented for claim 1, the terms "certify" and "verify" have specific meanings, and Lee does not teach confirming that data can be normally written ("certify"), nor confirming that the data written in a certify process can be normally read ("verify"). The Office Action's reliance on ¶¶ 0048-0050 as teaching these limitations is misplaced. The cited paragraphs explains how Lee's status table has a field for every spare block, and that every field of the status table will be marked with either a "U" (used), "D" (defective), or "F" (free). The status of these spare blocks as either used, defective, or free, does not indicate whether a certify or verify process has been conducted, nor does it teach "means for performing ... the certify process and the verify process" as recited by claim 2.

Claim 3 depends from claim 1, and should be allowed along with claim 1, and on its own merits. Specifically, claim 3 recites "means for performing the certify process and the verify process on the alternative area first before the user data area" and "means for registering ... a position ... at which position an error occurs in the certify process or the verify process." For all the reasons presented for claim 2, Lee does not teach "means for performing the certify process and the verify process." The Office Action's reliance on ¶ 0043 is misplaced for all the same reasons offered for element 38 (FIG. 5) while presenting claim 1. Specifically, mere recitation of a control circuit 38 within a functional block diagram of an optical disk drive 30 is insufficient to teach a

certify and verify process. Similarly, ¶ 0044 does not teach the claimed "means for registering" where ¶ 0044 merely discloses a status table that records the usage of all the spare blocks, but that usage is not determined when an error "occurs in the certify process or the verify process" as recited by claim 3.

Claim 4 depends from claim 1, and should be allowed along with claim 1, and on its own merits. Specifically, claim 4 recites "means for maintaining a position at which the error occurs when the certify process or the verify process is performed on the one of the user data areas" and "means for assigning, after the certify process and the verify process are performed on the alternative area, the alternative destination." For all the reasons presented previously for claims 1-3, Lee does not teach a certify and verify process, and consequently cannot teach either the "means for maintaining a position" or the "means for assigning" elements recited by claim 4.

Claim 5 recites an information recording/reproducing apparatus comprising "a formatting part that performs a format process with respect to the user data areas and the alternative areas in a predetermined sequence; a defect field detection part that detects a defect field at the time of a format process ... and a first alternative field assigning part that assigns ... an alternative field in another alternative area to which the format process has already been performed." Lee fails to teach at least these important limitations.

The Office Action relies on FIG. 7A as disclosing "a formatting part." Applicant submits that this reliance is misplaced. FIG. 7A is used to show that when problems occur while accessing an optical disk, the status table 50 is updated. Updating the status table to reflect the "used," "free," or "defective" status of a block within a Spare Area merely reports on the status of blocks within the Spare area, and does not teach "a formatting part that performs a format process with respect to the user data areas and the alternative areas in a predetermined sequence" as recited by claim 5. Additionally, FIG. 6 and ¶ 0045 show and describe, respectively, status table 50 locations as they correspond with the spare blocks on the optical disk track 24. They do not teach "a defect field detection part that detects a defect field at the time of a format process," as no format process is being conducted. Finally, ¶ 0051 – cited as teaching an alternative field in another alternative area

to which the format process has already been performed – merely discusses updating the status table when the optical disk drive uses a block of a Spare Area to write data intended for a defective portion of a Data Area. Paragraph 0051 does not teach that the data intended for the Data Area is part of a format process.

Claim 6 depends from claim 5, and is allowable along with claim 5, and on its own merits. Specifically, claim 6 recites limitations similar to those presented for claim 2, and is allowable for all the reasons presented for claim 2.

Claim 7 depends from claim 6, and is allowable along with claim 6, and on its own merits. Specifically, claim 7 recites limitations similar to those presented for claim 3, and is allowable for all the reasons presented for claim 3.

Claim 8 depends from claim 6, and is allowable along with claim 6, and on its own merits. Specifically, claim 8 recites limitations similar to those presented for claim 4, and is allowable for all the reasons presented for claim 4.

Claim 9 depends from claim 7, and is allowable along with claim 7, and on its own merits.

Claim 10 recites an information recording/reproducing apparatus comprising "an alternative area format process part that performs a format process on the alternative areas separately form the user data areas," "a formatting part that performs a format process with respect to the user data areas in a predetermined sequence with the format process in the alternative areas" and "a defect field detection part that detects a defect field existing in the alternative area at the time of the format process by said alternative area format process part before the format process is completed with respect to all the user data areas and all the alternative areas." Lee fails to teach at least these important limitations.

The Office Action relies on FIG. 7A as teaching the first limitation presented above, and FIG. 6 along with ¶ 0045 as teaching the second limitation presented above. Applicant submits that the Office Action's reliance on these disclosures is misplaced. FIG. 7A is used to show that when

problems occur while accessing an optical disk, Lee's status table 50 is updated. Updating the status table to reflect the "used," "free," or "defective" status of a block within a Spare Area merely reports on the status of blocks within the Spare area, and does not teach "a formatting part that performs a format process with respect to the user data areas and the alternative areas in a predetermined sequence" as required by claim 10. FIG. 6 and ¶ 0045 show and describe, respectively, status table 50 locations as they correspond with the spare blocks on the optical disk track 24. They do not teach "a defect field detection part that detects a defect field at the time of a format process," as no format process is being conducted. Finally, based on Lee not teaching a format process, Lee cannot teach "perform[ing] a format process on the alternative areas separately from the user data areas" as recited by claim 10.

Claim 11 recites an information recording/reproducing apparatus comprising "a formatting part ... and an alternative field assigning part that assigns, after the format process ends, an alternative field for replacing the defect field." For all the reasons presented for claim 10, Lee does not teach "a formatting part" as recited by claim 11. Additionally, because Lee does not teach a format process, Lee cannot teach "assign[ing], after the format process ends" as recited by claim 11.

Claim 15 recites a computer-readable recording medium recording a program for causing a computer to carry out "a formatting part ... a defect field detection procedure ... and a first alternative field assigning procedure that assigns ... an alternative field in another alterative area to which the format process has already been performed according to a predetermined sequence." For all the reasons presented for claim 10, Lee does not teach "a formatting part" as recited by claim 15. Additionally, because Lee does not teach a format process, Lee cannot teach "an alternative field in another alternative area to which the format process has already been performed." Finally, for all the reasons presented for claim 1, ¶ 0051 does not teach "according to a predetermined sequence" as recited by claim 15.

Claims 16, 17, 18, 19, and 20 recite limitations similar to those presented for claims 10, 11, 5, 10, and 11, respectively, and should be allowed for all the reasons presented for these respective claims. Accordingly, the rejection should be withdrawn, and the claims allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

Dated: November 12, 2008

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